

Amendments to the Specification:

Please amend the Title of the Invention to read as follows:

DISPENSING APPARATUS AND CARTRIDGE WITH DEFORMABLE TIP

Please add the following new paragraph after the Title and before the first line of the paragraph ending on line 5 of page 1.

This application is a continuation of prior U.S. Application No. 10/112,450, filed on March 29, 2002. The entire disclosure of U.S. Patent Application No. 10/112,450, filed on March 29, 2002, is expressly incorporated by reference in this application.

Please replace the paragraph, beginning at page 2, line 27, with the following rewritten paragraph:

Although these devices may be able to dispense and an appropriate drug for a time span of a week or more, they have not been widely used. This is because their application is difficult and time consuming and the device may be dislodged by the patient during tooth brushing, flossing or eating.

Please replace the paragraph, beginning at page 6, line 1, with the following rewritten paragraph:

Fig. 5C is a cross-sectional view taken along line 5-5 of the cartridge of Fig. 4 with the plunger in a first position but lacking with the cap and with the composition removed;

Please replace the paragraph, beginning at page 8, line 29, with the following rewritten paragraph:

Handle 22 and all components thereof, except the spring 88, is are typically made of materials such as metals and in particular surgical grade steels, for example, 303 Stainless Steel. The spring 88 is typically made of metals such as surgical grade steels, and for example, stainless steels other than 303 Stainless Steel. Accordingly, the handle 22, including the spring 88, is sterilizable and reusable. Handle components may also be made by injection molding of suitable resins.

Please replace the paragraph, beginning at page 9, line 29, with the following rewritten paragraph:

A nub 130 protrudes from the collar 124. This nub 130 is correspondingly shaped, for example, semicircular here, with respect to the notch 70 in the handle 22, for seating therein, to prevent rotation of the cartridge 24. This nub 130 could also be any other shape provided

that upon seating in the notch 70, typically correspondingly shaped, such that the seating will prevent rotation of the cartridge 24. The nub 130 is for example, positioned approximately 180 degrees with respect to the bending of the tube portion 106, for ease of access to the periodontal pocket by the dental professional. However, any other positioning is also suitable.

Please replace the paragraph, beginning at page 11, line 1, with the following rewritten paragraph:

An amount of a composition 154 is typically placed (preloaded) into the tip ~~120~~ 140 (and if necessary into the tube portion 106). This composition is typically a particulate composition, such as a dry microparticle composition in a sufficient treatment quantity. For example, the composition can be ARESTIN™ minocycline H_{ydrochloride} (HCl) microspheres, from OraPharma, Inc., 732 Lewis Drive, Warminster, PA 18974, for example, in a 1 mg dosage, or those compositions as disclosed in U.S. Patent Nos. 5,000,886, 5,143,661, 5,236,355, 5,366,733, 5,500,228, and 5,622,498, all six disclosures of which are incorporated by reference herein. These compositions can be dispersed in matrices of biocompatible and biodegradable polymers, in accordance with the disclosure of U.S. Patent No. 5,622,498.

Please replace the paragraph, beginning at page 12, line 3, with the following rewritten paragraph:

For example, polymers for the aforementioned matrices may include polyglycolide, poly(l-lactide), poly(dl)-lactide), poly-(glycolide-co-lactide), poly-(glycolide-co-dl-lactide), poly (alpha hydroxybutyric acid), poly(orthoesters), poly-(p-dioxanone) and mixtures thereof. The polymers can also be block copolymers of polyglycolide, trimethylene carbonate and polyethylene oxide. These polymers may also be such that they become tacky upon contact with water.

Please replace the paragraph, beginning at page 15, line 12, with the following rewritten paragraph:

Turning to Fig. 15, the locking of the cartridge 24 in the sleeve 40 is shown in detail. Here, the cartridge 24 has been pushed proximally, as the handle 22 remains at rest, as the thumb ring 44 is at the "at rest" distance D from the sleeve 40. The inward or proximal pushing of the cartridge 24 causes the flanges 128 to abut the body 90b of the distal confinement 90, whereby the flanges 128 spread radially outward. Inward movement continues, until the nub 130 seats in the notch 70 (inward movement is made with nub 130 and

notch 70 in alignment) and the protrusions 136 engage the groove 74. This is typically noticed tactiley as well as an auditory "click" can be detected.

Please replace the paragraph, beginning at page 15, line 21, with the following rewritten paragraph:

Additionally, the plunger 108 aligns with the shaft end 84, whereby the shaft end 84 contacts the central surface 170. The plunger 108 is in the first position, as shown in Fig. 5A. Throughout this attachment process, distal resistance is provided by the spring 88. Locking of the cartridge 24 is complete, as the nub 130 is seated in the notch 70, the collar 124 is close to or in abutment with the edge 71 of the sleeve 40, and the protrusions 136 of the flanges 128 are seated in the groove 74.

Please replace the paragraph, beginning at page 15, line 28, with the following rewritten paragraph:

The tip 140, with the composition 154 therein, is in its normal or at rest geometry, with a circular or substantially circular opening and cross section, as shown in Fig. 16A. The dental professional can now manually deform the tip 140, typically by flattening it with an instrument. This flattening results in the opening 146 and the tip 140 having an oval or flattened shape (and geometry), as shown to in Fig. 16B.

Please replace the paragraph, beginning at page 16, line 10, with the following rewritten paragraph:

In Fig. 18, the composition 154 can now be released into the pocket. Here, turning also to Fig. 15, the thumb ring 44 is moved distally (toward the sleeve 40), such that the shaft 46 and distal tip 84 thereof ~~moves move~~ distally, forcing the plunger 108 distally, ultimately to the second position shown in Fig. 5B, to force composition 154 out of the tip 140 through the opening 146 and into the pocket 320.

Please replace the paragraph, beginning at page 16, line 27, with the following rewritten paragraph:

Attention is now directed to Fig. 20. Here, the cartridge 24 has been exhausted as the plunger 108 is in the second position, as shown in Fig. 5B above. The spring 88 has caused the distal end 84 of the shaft 46 to move out of contact with the central surface 170 of the plunger 108, as the distal end 84 moves proximally toward the thumb ring 44, and ~~return to the at rest~~ returns to the "at rest" position of the handle 22.

Please replace the paragraph, beginning at page 17, line 3, with the following rewritten paragraph:

The thumb ring 44 is pulled proximally (away from the sleeve 40), a distance D plus an additional distance n, expressed $D + n$. The spring 88 is compressed, as this proximal pulling takes the body 90b of the distal confinement 90 out of abutting contact with the flanges 128, allowing them to spring back, moving radially inward, to their rest or normal positions. The protrusions 136 of the flanges 128 no longer seat in the groove 74, but rather just slightly extend into the groove 74. This allows for easy manual removal of the cartridge 24 from the handle 22, while the cartridge 24 is retained in an engagement with the handle 22, should the handle 22 be pointed downward, so the cartridge 24 remains in and does not fall out of the handle 22. This ease in removal is accomplished as the rounded edges of the protrusions 136, coupled with the triangular edges 76 of the ~~grove~~ groove 74, allow for the cartridge 24 to be easily pulled out of the sleeve 40 with minimal force. Once the cartridge 24 is removed from the handle 22, the process may be repeated with additional cartridges for as long as desired.